



Universität Augsburg

Institut für
Mathematik

Friedrich Pukelsheim

A Parliament of Degressive Representativeness?

Preprint Nr. 015/2007 — 23. Mai 2007

Institut für Mathematik, Universitätsstraße, D-86135 Augsburg

<http://www.math.uni-augsburg.de/>

Impressum:

Herausgeber:

Institut für Mathematik

Universität Augsburg

86135 Augsburg

<http://www.math.uni-augsburg.de/forschung/preprint/>

ViSdP:

Friedrich Pukelsheim

Institut für Mathematik

Universität Augsburg

86135 Augsburg

Preprint: Sämtliche Rechte verbleiben den Autoren © 2007



14. März 2007 FP/fp

A Parliament of Degressive Representativeness?

For the election of the European Parliament, the Treaty establishing a Constitution for Europe introduces an absolute novelty, degressive proportionality, while the established principle of electoral equality makes no appearance at all. The normative goals in the Treaty text, when turned into operational electoral rules, entail serious obstacles implying an unnecessary provocation of the electorate. We argue that, since nobody knows its meaning, “degressiveness” ought to be deleted from the text, while the principle of electoral equality, treasured by all Member States, should be included.

Introduction

The Treaty establishing a Constitution for Europe was signed in Rome on 29 October 2004. Article I-20 pertains to the election of the European Parliament. Here we will be concerned with Sections (2) and (3):

(2) The European Parliament shall be composed of representatives of the Union’s citizens. They shall not exceed seven hundred and fifty in number. Representation of citizens shall be degressively proportional, with a minimum threshold of six members per Member State. No Member State shall be allocated more than ninety-six seats. [...]

(3) The members of the European Parliament shall be elected for a term of five years by direct universal suffrage in a free and secret ballot.

Section (2) requires the representation of citizens to be proportional, which merits approval. We argue that the additional attribute, that the representation be *degressively* proportional, is superfluous. Proportional representation is an abstract ideal, and must be interpreted in the light of the concrete system in which it is put to work. For the election of the European Parliament there are various options how to satisfy the constitutional requirements, and how to verify the proportional representation ideal. Of these we present three, Variants A–C, none of which deserves to be put down by suffering from degressiveness of some sort or other.

The issue of how the Member States are to be represented in the European Parliament has prompted over the years an extensive literature, of which we mention but a few items. Hovehne (1999) investigates the problem from the viewpoint of constitutional law, Scheffler (2005) from the viewpoint of political sciences. Here we do not question the electoral principles set out in the Treaty text. Rather we outline how its qualitative-normative goals can be translated into quantitative-operational rules, following the lead of Balinski and Young (1982a).

Neither of the Variants A–C is entirely new. Variant A, which we call *restricted proportionality*, is treated in detail in the seminal monograph of Balinski and Young (1982b); but the other two variants also obey the given minimum and maximum restrictions. Variant B, referred to as *stratified proportionality*, splits the set of median Member States into two parts that are then handled separately; but the other two variants also split the Member States into subsets for separate handling. The *itio in partes* has its roots in the middle ages, see Pukelsheim and Maier (2006). Variant C, termed *deferred proportionality*, was already proposed by Wessels (1990); but the other two variants also implement a sort of belated proportionality that applies only after observing other restrictions.

The naïve question of what proportional representation *really* means does not submit to a full answer. There are only partial answers, by placing the question into the constitutional frame where it is asked. With this view in mind, all three variants are viable options to go along with the Treaty establishing a Constitution for Europe, or so we believe. Other approaches are conceivable. Bertini, Gambarelli and Stach (2005) include the economic strength of a Member State to calculate its representation. Ramírez, Palomares and Márquez (2006) use advanced tools in order to give the notion of degressive proportionality an operational meaning.

I. Seat Restrictions and Data Base

There are many electoral systems guaranteeing a minimum number of seats in order to secure appropriate representation of sparsely populated regions. In Switzerland, each Canton is assigned at least one seat in the Nationalrat. In the USA, every state of the Union is apportioned at least two members in the House of Representatives. In France, each Département sends at least two deputies into the Assemblée nationale. In Spain, every province is allocated at least two deputies in the Congreso.

The minimum representation of 2 seats is popular since in addition to a government majority deputy, a sufficiently strong opposition minority might win the second seat and thus would also achieve representation. By way of comparison a minimum of 6 seats, as in Section (2) of the Treaty text, sounds excessive. Fortunately mathematics can easily handle minimum thresholds, whether they are set at 2 or at 6, and can also accommodate maximum allocations, such as the 96 seats specified in Section (2).

We present three examples of how the qualitative prescriptions can be filled with quantitative life. Our calculations are based on the 2004 electorate, that is, the number of people who were entitled to vote in the 2004 European Parliament election. With the last election determining the conditions under which the next election is to be held, the data base is updated promptly. Moreover, every individual is registered as a voter in just one Member State and hence is counted once only.

There are other data bases suggesting themselves. For instance, census counts could be used. However, an individual may be a citizen of several Member States. Such individuals would be counted multiple times. Moreover, population data are updated usually in a decennial rhythm, not with every election.

II. Variant A: Restricted Proportionality

Variant A, restricted proportionality, follows the ideal of pure proportionality as far as the minimum threshold and maximum allocation permit to do so. Except for the minimum and maximum restrictions, every seat represents 499 000 voters. Dividing this number into the British electorate, we obtain a quotient of 88.49 “fractional seats” which get rounded down to 88 whole seats. For Spain, the resulting quotient is 69.55 which is rounded up to 70 seats. See the Table 1 and Figure 1 for details.

All quotients are rounded in the same, standard fashion: fractions below one half are rounded down, above one half, up. The rounded quotients yield the seat number only when they come to lie in the feasible range between 6 and 96 seats. Otherwise, the minimum threshold 6 or the maximum allocation 96 take over. Seven Member States profit from the minimum threshold, two must make do with the maximum allocation.

III. Obstacles

Minimum and maximum restrictions decrease the number of seats available for a proportional apportionment. In Variant A, the restrictions bind 234 seats, leaving just 516 seats for the proportional apportionment. Yet Variant A demonstrates that, in the range thus confined, strict proportionality may be achieved. How is Variant A to be judged in view of the stipulations of the Treaty text? Does it qualify to be degressively proportional as demanded by Section (2)?

The clear question must have a clear answer, “yes” or “no”. If the answer is “no”, Variant A is unconstitutional. Thus degressive proportionality were a constitutional construct ruling out strict proportionality even in partial ranges where it is achievable. The Treaty establishing a Constitution for Europe would be the first constitutional text in this world excluding proportional representation as unconstitutional!

The other answer would be an optimistic “yes”, Variant A is constitutional. Variant A obeys the minimum threshold, observes the maximum allocation, and otherwise implements proportional representation. Thus it fulfills all demands set forth in the Treaty establishing a Constitution for Europe are fulfilled. Why introduce the nebulous attribute of degressiveness?

We surmise that one reason for the introduction of degressiveness is that the noble goal of proportionally representing the people is misinterpreted as a fierce attack on the vested rights of the incumbent members of parliament, triggering tenacious resistance. Luckily, there are less painful alternatives that reconcile proportionality with minimum and maximum restrictions.

IV. Variant B: Stratified Proportionality

Variant B, stratified proportionality, splits the Member States into two parts, the bigger states and the smaller states. For example, we define the bigger part to consist of the seven states with more than fifteen million voters each. They total nearly three quarters of the whole electorate, but are apportioned just two thirds of the seats. The twenty smaller states that are remaining make up but a quarter of the electorate, yet are awarded a third of the seats.

Now 450 000 voters are needed to secure one of the 500 seats of the bigger states. For one of the 250 seats of the smaller states, 431 000 voters suffice. Variant B may come closest to what the authors of the Treaty establishing a Constitution for Europe possibly had in mind: It trims the giants, dampens the bigger states, lifts the smaller states, and supplies the dwarfs with the constitutionally patented six-pack.

V. Variant C: Deferred Proportionality

Article I-1 of the Treaty establishing a Constitution for Europe mentions two groups of constitutional subjects of the European Union, the citizens and the States of Europe. Hence it is in line with the Treaty text to honor both groups. This justifies Variant C, deferred proportionality.

To begin with it assigns 6 seats to each of the twenty-seven Member States, thus allocating 162 seats. Then the remaining seats (588) are apportioned following the proportional representation ideal. This raises the number of voters needed for a “proportionality seat” to 634 000. For example, Italy, with a quotient of 78.63, is allocated 79 proportionality seats; together with her Member State share of 6, she is assigned 85 seats. Only Germany is limited by the maximum allocation of 96 seats.

VI. A Missing Link: Electoral Equality

Variants A–C have in common that in essence they derive the seat apportionment from the citizens, through the electorate. According to the Treaty text, the European Council would decree the seat numbers, by negotiation. While the decreed numbers would document that some Council members negotiate more successfully than others, they break the direct bond to the people. The system discourages voters when those owing their office to democratic elections may retreat to first negotiate the voters' values as democratic sovereign.

Voters who fear to have fallen victim to some degeneracy of the electoral system may appeal to the constitutional principle of electoral equality, in most if not all Member States. However, the principle of an equal election is missing from the enumeration in the Treaty text. What would be different if Section (3) were to demand that the members of parliament shall be elected *in a free, equal and secret ballot*?

In the short run, nothing would change. For some years to come all Member States are free to organize the European Election in accordance with their national traditions. Therefore the European Union will have to live with twenty-seven national electoral equalities, more or less different, rather than being able to refer to a unique European electoral equality not yet conceived.

In the long run, however, the Constitution would insist that the election of the European Parliament follows the regulative idea of electoral equality, as do other elections. It may need some time before all Member States harmonize their electoral laws. Yet a constitutional principle of electoral equality would motivate both, citizens as well as the States of Europe, to further promote the unification of political parties and electoral systems. Whether it takes years or decades to do so remains to be seen. Occasionally the European Union has managed to achieve a goal faster than expected.

References

- Balinski, M.L. and Young, H.P. (1982a) ‘Fair representation in the European Parliament’. *Journal of Common Market Studies* 20, 361–373.
- Balinski, M.L. and Young, H.P. (1982b) *Fair Representation—Meeting the Ideal of One Man, One Vote* (New Haven). [Second Edition (with identical pagination): Washington DC, 2001.]
- Bertini, C., Gambarelli, G. and Stach, I. (2005) ‘Apportionment strategies for the European Parliament’. *Homo Oeconomicus* 22, 589–604.
- Hovehne, M. (1999) *Ein demokratisches Verfahren für die Wahlen zum Europäischen Parlament* (Frankfurt am Main).
- Pukelsheim, F. and Maier, S. (2006) ‘A gentle majority clause for the apportionment of committee seats’. Pages 177–188 in Simeone, B. and Pukelsheim, F. (eds.) *Mathematics and Democracy—Recent Advances in Voting Systems and Collective Choice* (Berlin).
- Ramírez, V., Palomares, A. and Márquez, M.L. (2006) ‘Degressively proportional methods for the allotment of the European Parliament seats amongst the EU member states’. Pages 205–220 in Simeone, B. and Pukelsheim, F. (eds.) *Mathematics and Democracy—Recent Advances in Voting Systems and Collective Choice* (Berlin).
- Scheffler, J. (2005) *One man, one vote, one value? Der schwierige Weg zu einem einheitlichen Wahlrecht für das Europäische Parlament* (Osnabrück).
- Wessels, W. (1990) ‘Institutionelle Strategien für die Politische Union: Eine Neuauflage der EEA?’ *Integration* 13, 192–203.

Member States EU-27	2004 Electorate	EP- Seats	Quotient [499 000]	Var. A	Quotient [540 000]	Var. B	Quotient [634 000]	Var. C
DE Germany	61 682 394	99	123.61	96	114.23	96	97.29	96
IT Italy	49 854 299	78	99.91	96	92.32	92	78.63	85
UK United Kingdom	44 157 400	78	88.49	88	81.77	82	69.65	76
FR France	41 518 582	78	83.20	83	76.89	77	65.49	71
ES Spain	34 706 044	54	69.55	70	64.27	64	54.74	61
PL Poland	29 986 109	54	60.09	60	55.53	56	47.30	53
RO Romania (estimated)	18 000 000	35	36.07	36	33.33	33	28.39	34
NL Netherlands	12 168 878	27	24.39	24	28.23	28	19.19	25
GR Greece	9 909 955	24	19.86	20	22.99	23	15.63	22
PT Portugal	8 821 456	24	17.68	18	20.47	20	13.91	20
CZ Czech Republic	8 283 485	24	16.60	17	19.22	19	13.07	19
HU Hungary	8 046 247	24	16.12	16	18.67	19	12.69	19
BE Belgium	7 552 240	24	15.13	15	17.52	18	11.91	18
SE Sweden	6 827 870	19	13.68	14	15.84	16	10.77	17
BG Bulgaria (estimated)	6 300 000	18	12.63	13	14.62	15	9.94	16
AT Austria	6 049 129	18	12.12	12	14.04	14	9.54	16
FI Finland	4 227 987	14	8.47	8	9.81	10	6.67	13
SK Slovak Republic	4 210 463	14	8.44	8	9.77	10	6.64	13
DK Denmark	4 012 663	14	8.04	8	9.31	9	6.33	12
IE Ireland	3 131 540	13	6.28	6	7.27	7	4.94	11
LT Lithuania	2 654 311	13	5.32	6	6.16	6	4.19	10
SI Slovenia	1 628 918	7	3.26	6	3.78	6	2.57	9
LV Latvia	1 397 736	9	2.80	6	3.24	6	2.20	8
EE Estonia	873 809	6	1.75	6	2.03	6	1.38	7
CY Cyprus	483 311	6	0.97	6	1.12	6	0.76	7
MT Malta	304 283	5	0.61	6	0.71	6	0.48	6
LU Luxembourg	214 318	6	0.43	6	0.50	6	0.34	6
<i>Total</i> [Divisor]	<i>377 003 427</i>	<i>785</i>	[499 000]	<i>750</i>	[431 000]	<i>750</i>	[634 000]	<i>750</i>

Table 1. In Variant A (restricted proportionality), a seat represents 499 000 voters. For the United Kingdom, the ensuing quotient 88.49 is rounded down to 88 seats, for Spain, the quotient 69.55 is rounded up to 70 seats. When any rounded quotient falls outside the range from 6 to 96, the limits take over. Variant B (stratified proportionality) allocates 500 seats to the seven bigger Member States (divisor 540 000), and 250 seats to the twenty smaller Member States (divisor 431 000). Variant C (deferred proportionality) grants each Member State 6 seats to begin with, before proportionally apportioning the remaining seats (divisor 634 000).

